Large Scale Demonstration & Deployment Project

...and now for the

GOOD NEWS

FACILITIES DECOMMISSIONING DIVISION

321-M Fuel Fabrication Facility, location of the LSDDP.

Contaminated HVAC system located on facility roof. X-Ray, K-Edge Heavy Metal Detection System will be used to assay uranium holdup.

The 321-M Fuel Fabricating Facility Large Scale Demonstration and Deployment Project (LSDDP) at the Savannah River Site began in April, 1998. The project, funded by the DOE Federal Energy Technology Center (FETC), in Morgantown, WV, is intended to demonstrate emerging technologies and transfer them to other federal facilities and to private industry. The objectives of the FETC-SRS partnership include a thorough review of potential deactivation technologies to evaluate applicability to SRS needs; full-scale field demonstration of new and innovative technologies; and deployment of the most successful technologies to accelerate deactivation of the fuel fabrication facility.

The LSDDP is managed by an Integrating Contractor Team (ICT) consisting of DOE-Savannah River, Westinghouse Savannah River Company, Duke Engineering & Services, Florida International University, and Bechtel National-Oak Ridge. The ICT will identify and evaluate innovative technologies for demonstration that have strong potential to support the end goals of the deactivation project. The following technologies have been identified as

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potential technologies for demonstration:

Characterization Technologies

* **Box Counter** - system that can assay large containers (B-25 size) of uranium contaminated dense waste forms

* **Long Range Alpha Detection (LRAD)** - system capable of measuring surface contamination of tubular and miscellaneous components for unrestricted release

* **Laser Induced Emission Spectroscopy (LIBS)** - portable system for real time characterization of surface contamination

* **X-Ray, K-Edge Heavy Metal Detection** - system used for the assay measurements of uranium holdup in components

Decontamination Technologies

* **Strippable Coatings** - side-by-side assessment under radiological conditions of commercially available strippable coatings. This supports the second phase of a cooperative agreement between Florida International University and FETC for strippable coatings study.

* **Thermal Spray Vitrification** - decontamination method that traps contaminants with a spray-on molten glass, solidifies and flakes off, and can be collected for disposal

Stabilization Technologies

* **Asbestos Neutralization** - In-situ treatment for converting asbestos to a non-hazardous material

Worker Safety

* **Heat Stress Mitigation** - technology to reduce heat stress and improve worker production in hot environments

Additional technologies will be identified and evaluated as the LSDDP progresses.

Contaminated tools located in mechanic's tool chest. Long Range Alpha Detection System will be used to measure surface contamination.

Contaminated induction furnace. Strippable coating technology will be used to decontaminate induction furnace enclosure surfaces.

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